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PROGRAM PLANS FOR FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT, MARCH 1, 1967.

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FUTURE EDUCATIONAL RESEARCH PLANNED BY THE FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT IS THE SUBJECT OF THIS REPORT. ONE OF THE PROJECTS CONCERNED INSERVICE TEACHER EDUCATION. THE FOUR MAJOR AREAS OF EMPHASIS IN THIS PROJECT WERE BASIC TEACHING TECHNIQUES, TEACHING IN NEW PROGRAMS, TEACHING NON TYPICAL GROUPS, AND TEACHING NEW CURRICULA. IMMEDIATE, INTERMEDIATE, AND LONG RANGE OBJECTIVES ARE DESCRIBED, AS ARE THE COMPONENTS IN THE AFOREMENTIONED FOUR AREAS OF EMPHASIS. CHARTS INDICATE THE SCOPE OF THE TEN YEAR PLAN. THE OTHER PROJECT WAS A COMMUNICATION PROGRAM IN WHICH THE OBJECTIVE WAS TO CONDUCT RESEARCH, DEVELOPMENT TASKS, AND OPERATIONS RESEARCH THAT WOULD AID SCHOOL PERSONNEL AS THEY MADE DECISIONS IN THE ORGANIZATION AND OPERATION OF SCHOOLS. SHORT TERM AND LONG RANGE OBJECTIVES ARE ALSO PRESENTED. SEVEN OTHER PROJECTS CONCERNING EDUCATIONAL METHODS, RESEARCH, TEACHER QUALIFICATIONS, COMMUNICATIONS PROBLEMS, CURRICULUM, AND MEASUREMENT ARE DISCUSSED AS A CONCLUSION TO THE REPORT. (JS)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PROGRAM PLANS

MARCH 1, 1967

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THE FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT is a regional educational laboratory, established through a Joint Powers Agreement in February, 1966. Present signatories include the Regents of the University of California, the California State Board of Education, the Trustees of the California State Colleges, the County Superintendent of Schools of the County of Monterey, the Board of Education of the San Francisco Unified School District, the Regents of the University of Nevada, and the Nevada State Board of Education.

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PROGRAM PLANS
FOR
FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

March 1, 1967

SUPPLEMENTARY REPORT OF LABORATORY ACTIVITIES

I

BASIC ORGANIZATIONAL DEVELOPMENT

Background Information

When the Far West Laboratory for Educational Research and Development entered its first operational period June 16, 1966, it was committed to five major program areas. These areas, defined in a general way in the developmental reports submitted to the U. S. Office of Education, represented a commitment to the region by the Board of Directors that the Laboratory would develop a programmatic focus in each of these areas. The focus in each case would be selected from among the major program components which were to be identified by the Executive Panel in accordance with the decision-making process outlined in the Progress Report, dated March 31, 1966.

In addition to the five program areas, the Laboratory was also committed to conduct six projects which were thought to have the potential for providing valuable input to the program decision-making process. These projects in general would give the staff and Executive Panel more precise information about the present state-of-affairs in the five program areas. A seventh project, the Measurement Project, was formulated and its first phase commenced in December 1966.

The report submitted to the U. S. Office of Education on September 15, 1966, contained a network plan showing the program planning strategy. In each of the

program areas, as a first step toward program development, there was to be a situation review conducted by the staff and reported in the form of a position paper for the consideration of the Executive Panel. The Panel was to discuss the major program components, assign relative priorities to them, and select a program focus for each of the program areas. The time schedule proposed in the September report specified that the program focus decisions would be made by June, 1967, in time to prepare budgets to be submitted during the summer of 1967.

The Board of Directors, the Executive Panel and the staff of the Far West Laboratory for Educational Research and Development were responsive to the commentary of the Committee convened by the U. S. Office of Education which reviewed the progress of the Laboratory October 10, 1966, as reported in Dr. Bright's letter of November 29, 1966, to the President of the Board of Directors. The Laboratory has made substantial progress in the definition of a primary and secondary program, and is developing concrete interrelated plans which specify strategies to accomplish the program objectives. The Laboratory has accelerated its schedule so that these decisions have been made several months earlier than previously scheduled, and it also chose to narrow its program effort to a primary and secondary program. These were "hard decisions," but the Executive Panel, broadly representative of the resources of the region, demonstrated that they had developed sufficiently effective procedures for considering alternatives.

Organizational Plan and Budget Development

In preparation for the January 26 and 27 meeting of the Executive Panel, the

staff prepared six alternative mission statements. These proposed missions were, in a sense, major components of one or more of the program areas. They represented staff judgment as to what would be possible to accomplish, considering the findings of the situation reviews. These alternate proposed missions also reflected the input to the Laboratory from the completed or partially completed projects. The Executive Panel did select a primary mission and a secondary mission at its January meeting and has recommended that the Board of Directors, on March 2, 1967, formally adopt their recommendations. With the development of specific plans for achievement of the objectives identified in the mission statements, these will become the primary and the secondary programs of the Laboratory. A more detailed description of these emerging programs and an analysis of the decision-making process involved by the Executive Panel in focusing upon them is presented in Part II. Also, there is a discussion of the planned re-direction, where necessary and desirable, of each of the projects currently in progress that were started before the selection of the primary and secondary missions of the Laboratory. Certain project activities will be redirected to become integral parts of one of the two programs, and will lose their identity as a project. Others will retain their identity as projects because they include activities leading to a product for which there is an acute need. These later projects will be considered auxiliary projects which contribute to the Laboratory's total effort, but are not direct components of either of the two programs.

The organizational plan and the accompanying budget were developed with the point of view that the budget should be based upon an analysis of the cost of

implementing the programs of the Laboratory.

Part III of this presentation shows an organization chart that represents the personnel commitment to the primary and secondary missions. This is accompanied by an activity analysis showing the budget level proposed for (1) the primary mission, (2) the secondary mission, (3) program planning and evaluation, (4) auxiliary project, (5) Laboratory development and (6) Laboratory maintenance.

II

PROGRAM DEVELOPMENT

The Decision-Making Process

The process of selecting a primary and a secondary mission for the Far West Laboratory for Educational Research and Development was achieved through the systematic application of the decision-making process described in the developmental reports. Crucial to the process is the work of the Executive Panel which is charged by the Board of Directors with determining the programs of the Laboratory and for setting priorities among program components. Commencing in September, 1966, the staff submitted four position papers to the Executive Panel based upon situation reviews in the following program areas: Full Education, Curriculum, Instructional Methods and Teacher Education. The fifth program area, Communication, while not the subject of a position paper, was discussed by the Panel on the basis of the Phase I Report of Project D, the Communication and Utilization Study, conducted by Lockheed Missiles and Space Company.

At the same time that the staff was preparing position papers for the Executive Panel deliberation, the six projects described in the developmental report were getting underway. One of the projects (the Conference on Instructional Methods) provided visible input for the situational review and position paper on Instructional Methods. The Communication Project Phase I Report was essentially a situational review of the Communications program area and the report represented the equivalent of a position paper. The other projects

were not far enough along to be made directly significant inputs but both the conference on Curriculum and the work on Methods of In-service Teacher Education have indirect effects upon the content of these papers. Furthermore, by the time of the December meeting of the Executive Panel, the projects had moved sufficiently far that they were valuable to the staff in the preparation of the six alternative missions which were being developed for the consideration of the Executive Panel at the January meeting.

While it is true that the six alternate proposed missions differed in the extent to which they proposed a more narrowly defined statement of objectives, they all represented proposed programs more narrowly focused than were the five program areas described in the developmental reports.

The alternate proposed missions developed by the staff for consideration of the Executive Panel at its January meeting were as follows:

Assessment, which proposed that the Far West Laboratory for Educational Research and Development develop a series of measures, both conventional and unconventional, that would determine the effectiveness of an institution's teacher training program by evaluating the performance level of the institution's graduates.

Educational Change, which proposed that the Laboratory undertake a program of research, development and dissemination focusing on the analyses and facilitation of educational change with primary emphasis on the personnel aspects of system change.

Communications, which proposed that the Laboratory conduct those research, developmental and operational tasks that will bring into existence effective

use of information about options available to school personnel as they make decisions in the organization and operation of schools.

Goals of Education, which proposed to aid in the development of a systematic approach to the educational process wherein the major goals of education serve as the determinants for specific pedagogical procedures.

Interaction, which proposed that the Laboratory study the interaction among curriculum, instructional methods and technologies in education and develop effective patterns for the use with different pupil groups in different school settings, and to provide the schools with information and procedures that will help combine these major factors into workable and effective educational systems.

Teacher Education, which proposed that the Laboratory improve the effectiveness of classroom teachers by developing, evaluating and implementing programs of in-service education based upon models and/or simulations of teacher behavior and aimed at essential skills and knowledge related to basic teaching performance, teaching non-typical pupil groups, teaching in new educational programs and teaching new curricula.

The mission statements were each presented to the Executive Panel for discussion at the meeting held January 26 and 27, 1967. Following general discussion, members of the Panel evaluated each mission in terms of the following:

- Importance
- Focus
- Breadth of tasks
- Pay-off
- Feedback

- Compatibility with resources
- Organizational involvement
- Fundamental problem
- Potential duplication of effort
- Funding feasibility
- Breadth of application
- Political feasibility
- Balance of tasks
- Overall risk

After the Executive Panel members evaluated each of the proposed missions, they ranked them in order of preference first for primary mission and then for secondary mission for the Laboratory. These were tabulated, as were the rankings of a similar evaluation by members of the Laboratory program staff. There was substantial agreement both among Panel members and among staff members that the primary mission should be Teacher Education and that the secondary mission should be Communication. The Executive Panel then took formal action recommending these to the Board of Directors.

The Teacher Education Program

Background

Introduction - The primary mission of the Far West Laboratory falls under the Teacher Education Program area. The initial program will lead to the development of a series of inservice education packages built upon the recent research findings of the Stanford Research and Development Center and applying microteaching and other promising innovations. This paper describes this program, and the mission it is designed to achieve as well as providing the rationale for its adoption.

History of the Problem - Providing effective inservice education has historically been one of the most difficult problems faced by educators and one which has rarely been solved adequately. With a few exceptions inservice training programs tend to be stereotyped and unimaginative. In California, over half of the school districts have no inservice programs beyond faculty meetings and teacher institutes (California Teacher's Association, 1959). Since most faculty meetings are concerned with administrative matters (Wood, 1959) and most institutes are concerned primarily with orientation and plans for the coming year (Landers, 1954), it may be seen that little effective inservice education is available in such districts. Yet, there is some evidence to indicate that well planned inservice programs can bring about significant gains in pupil achievement (Mork, 1953).

Educators are generally aware of the deficiencies of inservice education, but few districts have the resources to develop adequate programs. In the recent series of curriculum conferences conducted by the Laboratory, Dr.

Menesini reports that inservice education was perceived by participants as their most pressing problem. Doubts about the adequacy of current inservice programs are also reflected in the fact that nearly half of California's School Districts will not accept inservice training, travel, or vocational experience as a substitute for college credits on salary schedules (California Teacher's Association, 1965).

Supervision is often regarded as an aspect of inservice training, but in its usual form it is severely limited (Allen & Ryan, 1966). Among the deficiencies of typical supervision are the following:

- Supervision focuses upon evaluation instead of education and since it is often tied to contracts and tenure, it is psychologically threatening to most teachers.
- Supervisor's remarks are often couched in general terms and educational platitudes that the teacher cannot translate into specific action.
- The supervisor is often not trained in the teacher's subject matter area,
- The supervisor's remarks are often given in a frame of reference that the teacher does not understand or agree with. Teachers and supervisors often disagree in their recollections of what actually happened during the lesson.
- Supervisor's evaluation and feedback is often delayed.
- The teacher rarely has an opportunity to try out immediately the supervisor's suggestions.

<u>General Statement of the Problem to be Attacked in the Teacher Education Program</u> - Microteaching as developed in the Stanford Teacher Intern Program offers many significant advantages as a tool for inservice education, and the Laboratory plans

to attack the inservice education problem in this program through the use of microteaching and similar approaches. In a typical inservice lesson of the sort that would be developed in this program, the following sequence would be experienced by the teacher:

- The teacher would study instructional material on a specific skill such as reinforcing desirable pupil responses. Such material could be presented by any of the usual communication media such as textbook, programed text, motion picture, video tape, audio tape, etc.
- The teacher would then prepare and teach a short lesson to a small group of pupils.* This lesson would be videotaped.
- Immediately after the lesson, the teacher would watch the videotape playback of the lesson, focusing her attention on use of the skill in question.
- Immediately after the playback, the teacher would watch another videotape in which a model teacher would demonstrate the same skill. Remarks would be dubbed onto the audio track to prompt the teacher on important aspects of the model's behavior.
- Immediately after viewing the model tape, the teacher would reteach her lesson in order to reinforce the learned skill.

The effectiveness of this approach has already been demonstrated by research in the Stanford Intern Programs. It has been found significantly more effective than use of a well trained supervisor (Orme, M. E. J., 1966). The advantages of this approach for inservice training appear to be as follows:

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* For those few skills where a large group of pupils is needed to teach the skill effectively, such groups would be employed.

- No supervisor is used, thus, the teacher is not threatened.
- Since the model is videotaped, it is possible to develop a completely self contained package that can be used in any school by supplying the package and loaning the school a portable camera-videotape recorder-monitor.
- The training focus is on one specific skill at a time.
- The teacher gets immediate feedback from the videotape replay.
- The teacher gets immediate reinforcement from the reteaching step.
- Throughout the sequence the teacher is actually practicing the skill, i.e. learning by doing.

Relationship to Laboratory Program Areas - The original Laboratory plans included five program areas: Teacher Education, Instructional Methods, Curriculum, Full Education, and Communication. The proposed teacher education program will have four major thrusts: basic teaching skills, teaching in new programs, teaching non-typical groups, and teaching new curricula. The first two of these areas fit into the original instructional methods program area, the third into the full education area, and the fourth into the curriculum area. Since inservice education is an effective way to communicate new ideas and get them into the classroom, the program will have significant outcomes that support the communication area.

In summary, the Laboratory's primary mission is directed primarily at teacher education, but has major thrusts in the other four program areas of the Laboratory as well.

General Mission Statement

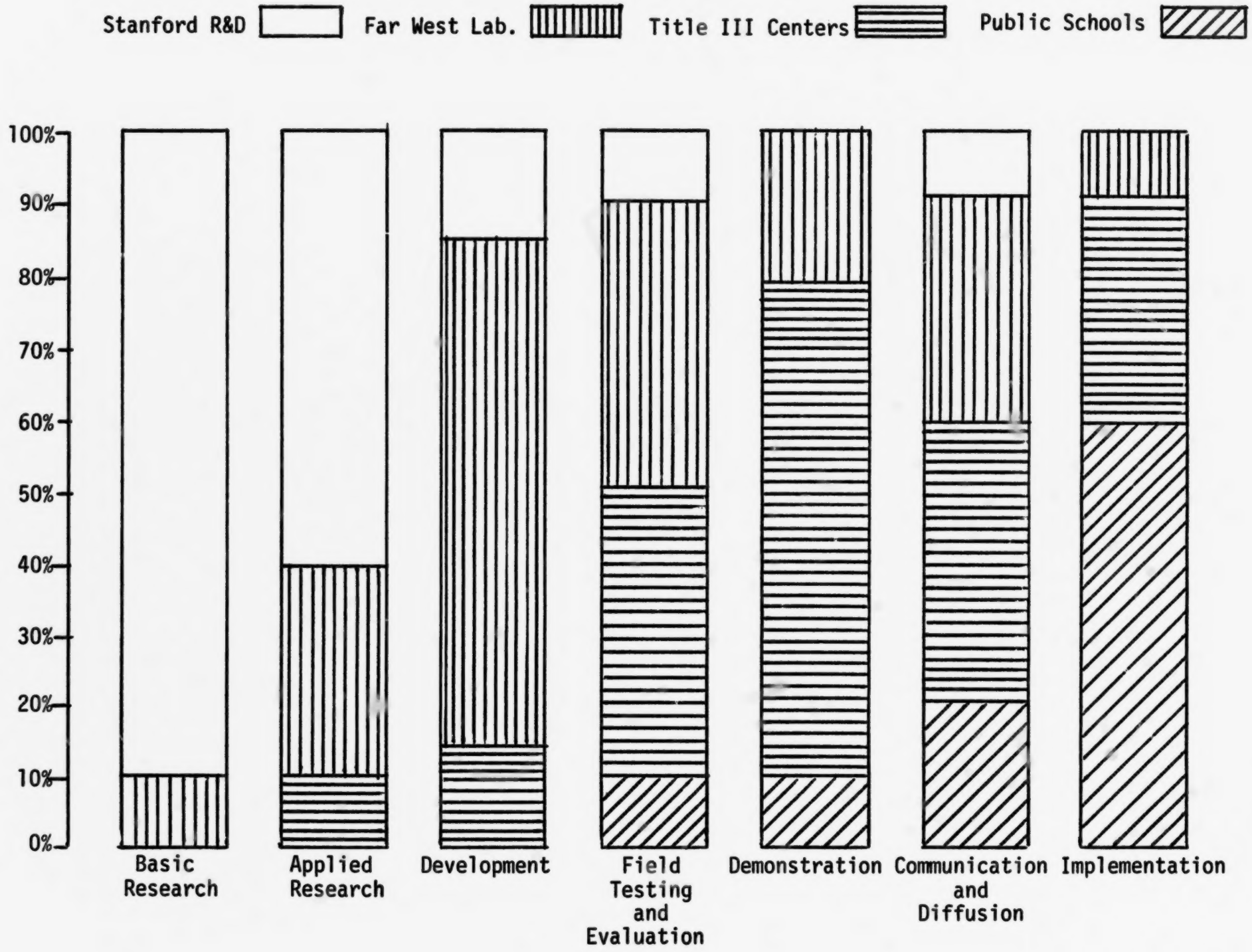
The mission to be achieved by the Teacher Education Program is to improve the effectiveness of classroom teachers by developing, evaluating and implementing programs of inservice education based upon models and/or simulations of teacher behavior and aimed at essential skills and knowledge related to basic teaching performance, teaching nontypical pupil groups, teaching in new educational programs, and teaching new curricula.

Relationship to Programs of Other Organizations - The Teacher Education Program will involve a close partnership between the Stanford Research and Development Center, the Far West Laboratory, selected Title III Centers and schools in the region. The basic research evidence and theoretical rationale developed at Stanford on the use of microteaching and other techniques for preservice teacher education will be applied to the development of the inservice packages at the Laboratory. A well integrated team effort involving the Stanford Research and Development Center, the Far West Laboratory and Title III Centers would assure a thorough coverage of all aspects of the research and development effort in the area of inservice education (see figure on Page 14).

The cooperating group of Title III Centers and their affiliated public schools would contribute to development, field testing, demonstration and implementation of the inservice training packages. It is anticipated that this program will also involve several colleges and universities in specific activities in which they have special interests. For example, San Jose State and the University of the Pacific might work with the Laboratory on the elementary school teaching skills packages, while the University of California

ESTIMATED CONTRIBUTION OF COOPERATING ACTIVITIES TO ACHIEVEMENT

OF DIFFERENT ASPECTS OF THE TEACHER EDUCATION MISSION



might play a major role in developing and testing packages for training teachers of culturally deprived pupils.

Objectives: Specific State of Affairs to be Realized

Immediate (to December 1, 1967) - The immediate objectives to be achieved in the Teacher Education Program will be as follows:

- Laboratory staff members will have developed a thorough knowledge of the present state of the art in preservice and inservice education and will have prepared a monograph that pulls together the work in this area into a comprehensive critical review.
- An inservice education package that improves the basic teaching skills needed in conventional secondary classrooms will be in operational use in schools of the region.
- A video tape describing and illustrating this package will have been prepared and shown over educational TV channels in the region and made available nationally to aid in dissemination. A similar video tape will be prepared for each subsequent package.

Intermediate - The intermediate objectives to be achieved would be:

- An inservice education package that improves the basic teaching skills needed in conventional elementary school programs will be in operational use in schools of the region.
- An inservice education package that improves teacher skill in solving the major teaching problems encountered in teaching culturally deprived urban Negro children in secondary schools will be in operational use in schools of the region, This package could be

developed in cooperation with the University of California Internship Program for teachers of culturally deprived children and could be used in this program as well as in inservice programs.

- An inservice education package that trains teachers in the skills required to function effectively as members of a secondary school teacher team will be in operational use in schools in the region.
- A series of televised lessons designed to train teachers to present the new aspects of one of the new Science Curriculum Projects will be in operational use in schools in the region that are adopting this curriculum. This package will also contain tapes or films showing a model teacher presenting each new aspect of this curriculum. These could be used not only in the microteaching package, but also could be shown to pupils when the teacher did not feel sufficiently prepared to offer these aspects of the curriculum herself. A similar effort underway at the University of Wisconsin Research and Development Center is showing promising results.

Long Range - The long range objectives to be achieved would be:

- A procedure will be available for identifying the critical teacher skills and behavior patterns in any teaching situation, and developing those skills to a satisfactory level of effectiveness through an inservice education program.
- A series of inservice education packages will be in operational use in each of the following areas:

- Basic teaching skills. Packages could be developed in such areas as: (1) Preschool instruction, (2) Primary grades instruction, (3) Intermediate grades instruction, (4) Junior High School Instruction, and (5) Secondary School instruction.
- Teaching non-typical student groups. Packages could be developed for such groups as: (1) Culturally deprived urban Negro high school students, (2) Culturally deprived rural Mexican-American elementary school pupils, (3) Rural Indian elementary school groups, (4) Gifted secondary school students, and (5) Slow learning secondary school students.
- Teaching in new educational programs. Packages could be developed in such areas as: (1) Teaching in a team teaching system, (2) Relating Classroom teaching to televised instruction, (3) Relating classroom teaching to programed instruction and (4) Teaching in the Individually Prescribed Instructional Program.
- Teaching new curricula. Packages could be developed that would train the teacher in the most difficult aspects of teaching a new curriculum. Among curriculum packages that could be developed are included: (1) School Mathematics Study Group (SMSG), (2) Science Curriculum Improvement Study, (3) Greater Cleveland Social Science Program, (4) Roberts' Linguistics Approach to Teaching English, (5) Richards' Threshold to Music, and (6) Biological Sciences Curriculum Study (BSCS).
- Sample lessons from the curriculum packages could also be used by teachers who are considering a new curriculum for adoption. The

experience of microteaching one or two sample lessons would greatly help the teacher answer three critical questions: (a) Can I teach this curriculum? (b) Do I like the content and the way it is presented? (c) Is this curriculum appropriate for my students?

Present State of Affairs

Preservice Education of Teachers - Teacher education may be divided into the two major areas of instructional skills and subject matter competency; and the two levels of preservice and inservice. In most preservice programs, the skills requirement is met by a combination of formal education courses and practice teaching. The effectiveness of such programs varies, but is generally low. Subject matter competency is a less difficult problem in preservice education, since acquisition of knowledge is a less difficult task than development of complex skills. This work is usually in the hands of the appropriate academic department.

Thus, although variability in quality is great in both areas from college to college, it is probably fair to say that skills preparation in preservice programs is generally much weaker than subject matter preparation.

Inservice Education of Teachers - Teacher needs for inservice training in subject matter generally differ somewhat from preservice needs. Since most teachers leave the college or university with a reasonably adequate knowledge of subject matter, their needs in this area develop as changes take place in their fields. New curricula usually introduce subject matter concepts that

were not taught when many of today's teachers were in training. For example, a mathematics teacher who was trained in the 1940's might be totally unfamiliar with the "set" concepts that play a major role in most "new mathematics" programs. Thus, the major inservice educational need in the content area is for programs that cover those specific aspects of a new curriculum that are new or unknown to teachers having a general competence in the subject.

In the skills area, most teachers have developed some skills through experience. Such learning is usually inadequate since skills are often developed without any significant help from supervisors or other teachers and without reference to models who have mastered the skills. Thus, unless the teacher has been trained in one of the few preservice programs, such as the Stanford University Intern Program, that focus on the development of basic teaching skills, she will usually have need of inservice training in this area.

Many teachers, however, need more than basic teaching skills in order to function effectively. Teachers of atypical student groups, for example, must develop behavior patterns and deal effectively with problems that are unique to teaching situations in which a specific pupil group is being taught. With a few exceptions, such as the University of California program for training teachers of culturally deprived children, the teacher receives no preservice training that prepares him to cope with these unique problems. The vast majority of teachers of atypical pupil groups are in desperate need of inservice training that can help them develop the skills they need.

The teacher who finds herself in a new instructional situation also requires inservice education if she is to develop the behavior patterns needed to function effectively. Many educational innovations that are becoming increasingly important in today's schools such as team teaching, televised instruction, individualized instruction, and computer assisted instruction require the teacher to use skills, and assume roles that were not even thought of ten years ago.

Tasks to be Done over a Ten Year Period

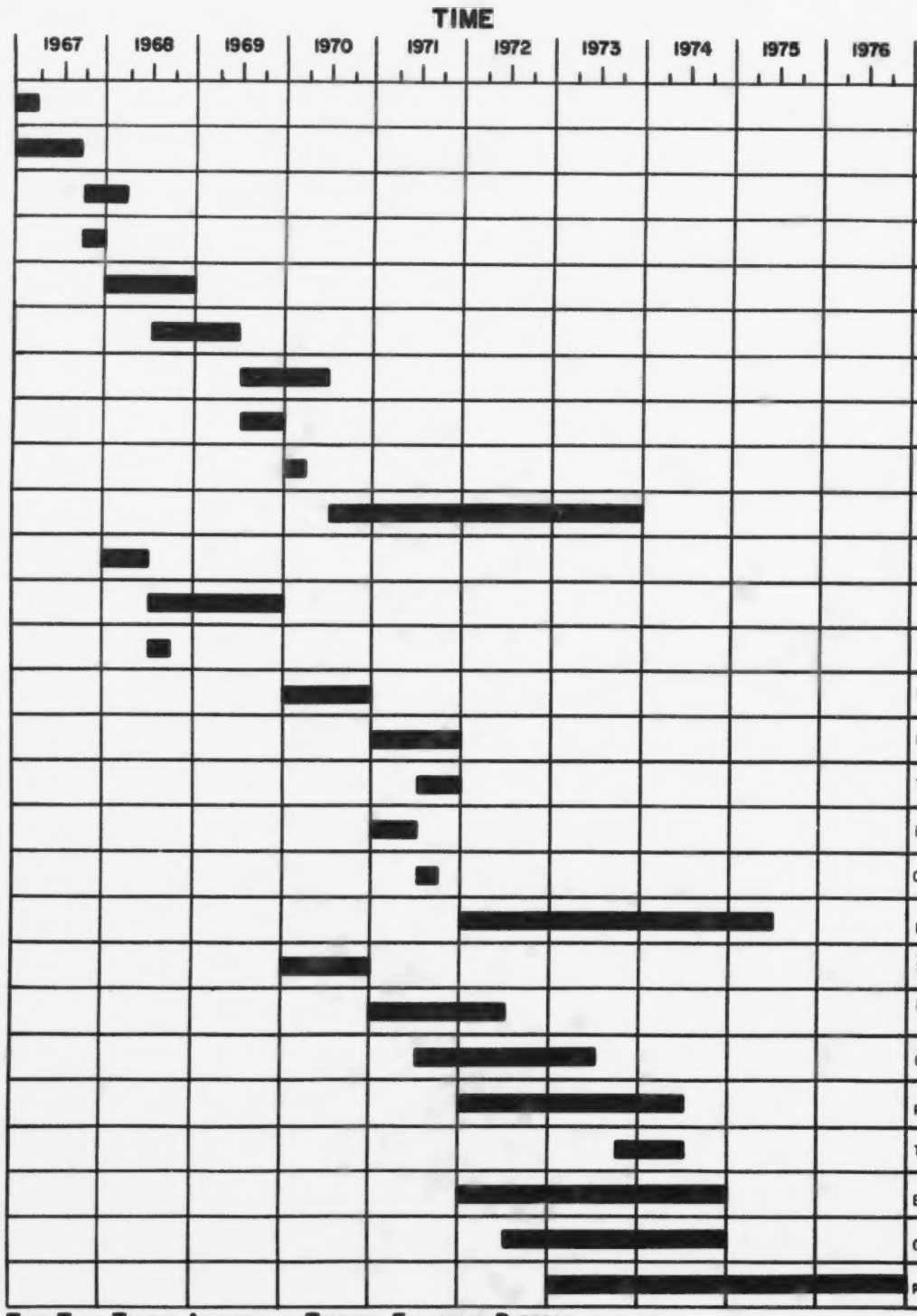
The following charts sketch out the tasks to be accomplished in the Teacher Education Program over the next 10 years. Each task is described briefly and the anticipated time schedule and personnel commitments are given.

It will be noted that the development, field testing and operational implementation of the different inservice education packages prepared under the Teacher Education Program will all follow the same general approach. It is anticipated, however, that there will be some differences in the time and effort required to produce a satisfactory package in different areas, and these differences are reflected in the time schedules and the amount of contract and consultant help that the Laboratory has scheduled for the various packages.

TEACHER EDUCATION PROGRAM--TEN YEAR PLAN

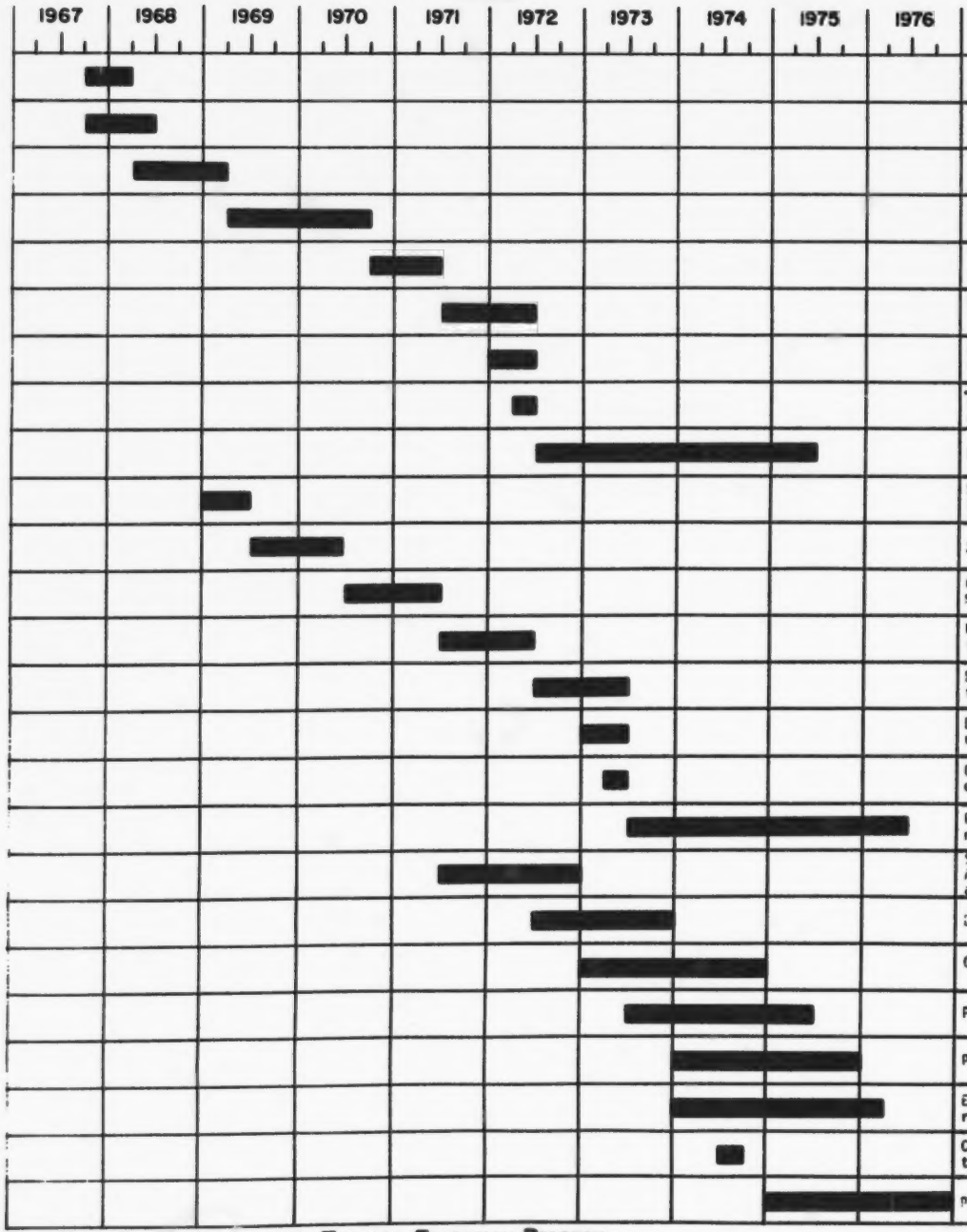
COMPONENT A

BASIC SKILLS INSERVICE EDUCATION



TASKS	TYPES OF PERSONNEL: LABORATORY	STANFORD R&D CENTER	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	COMMERCIAL PUBLISHERS
Review research literature on inservice training, microteaching and simulation techniques and teaching skills.	X						
Develop a microteaching package for inservice training (MPIT) of secondary teachers on two basic teaching skills, i.e. probing and reinforcement based on Stanford research program.				X		X	
Conduct extensive field testing of basic skills package to determine most effective ways to implement, degree of generalizability across subject areas, etc.	X		X	X		X	
Develop and distribute video tape describing the basic skills package for use by educational Tv channels.	X					X	
Conduct extensive field testing and applied field research on secondary basic skills MPIT to determine how changes in package relate to changes in teacher and pupil behavior.	X	X		X			
Put basic skills Secondary Teacher MPIT into operational use in secondary pilot schools of region; make revisions indicated by operational experience.	X		X	X			
Put basic skills Secondary Teacher MPIT into operational use throughout the Laboratory region.	X		X	X			
Evaluate basic skills Secondary Teacher MPIT by independent research agency and recommend revisions.					X		
Contract with commercial publishers for publication and national distribution of basic skills Secondary Teacher MPIT.	X						X
Put basic skills Secondary Teacher MPIT into operational use nationally.							X
Develop microteaching package for inservice training (MPIT) of elementary teachers in basic teaching skills.	X			X			X
Field test, revise, and prepare elementary teachers basic skills MPIT for operational use.	X	X		X		X	
Develop and distribute video tape on elementary teacners basic skills MPIT for use by educational Tv channels.	X					X	
Put basic skills elementary teacner MPIT into operational use in pilot schools.	X		X	X			
Put basic skills elementary teacner MPIT into operational use throughout Laboratory region.	X		X	X			
Test Secondary basic skills for preservice use in colleges of the region.	X	X			X		
Evaluate basic skills elementary teacher MPIT by independent research agencies and recommend revisions.					X		
Contract with commercial publishers for publication and national distribution of basic skills elem. teacner MPIT.	X						X
Put basic skills elementary teacher MPIT into operational use nationally.							X
Identify and define other critical basic teaching skills and behaviors through observation, review of literature, and work with consultants.	X	X				X	
Develop a series of 6 MPIT packages, covering 6 to 8 basic skills for teacners at the primary, intermediate and secondary levels.	X	X		X	X	X	
Conduct extensive field testing and applied field research on the 6 basic skills MPIT packages.	X	X					
Put the 6 basic skills MPIT packages into operational use in pilot schools.	X		X	X			
Test elementary basic skills MPIT for preservice use in colleges of education.	X	X			X		
Evaluation of 6 basic skills of MPIT packages by independent research agencies and recommendation for revision.					X		
Contract with commercial publishers for publication and national distribution of 6 basic skills MPIT package.	X						X
Put the 6 basic skills MPIT packages into operational use nationally.							X

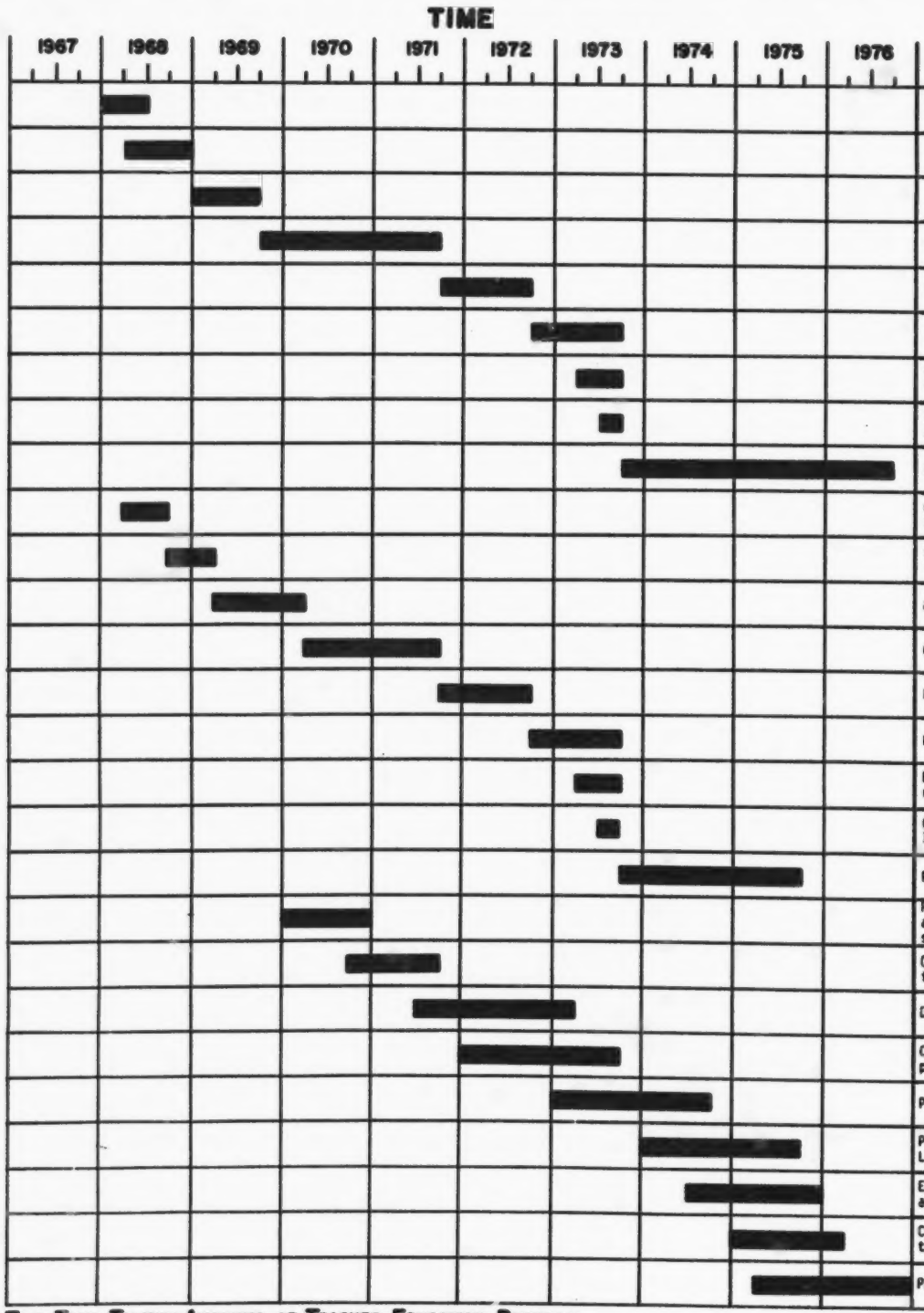
COMPONENT B
INSERVICE EDUCATION FOR TEACHERS OF NONTYPICAL GROUPS



TASKS	TYPES OF PERSONNEL						
	LABORATORY	STANFORD R&D CENTER	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	COMMERCIAL PUBLISHERS
Review literature on teaching nontypical groups and on specific skills needed by teachers of such groups.	X					X	
Study teachers of urban Negro culturally deprived secondary school students to identify and define critical skills and behaviors needed to teach this group.	X				X	X	
Develop MPIT for teachers of culturally deprived urban Negro nigh school students.	X				X		
Conduct extensive field testing and applied research on MPIT for teachers of culturally deprived urban Negro nigh school students.	X	X	X	X		X	
Put MPIT for teachers of culturally deprived urban Negro high school students into operational use in pilot schools.	X		X	X			
Put MPIT for teachers of culturally deprived urban Negro nigh schools students into operational use throughout the Laboratory region.	X		X	X			
Evaluation of MPIT for teachers of culturally deprived urban Negro nigh school students by independent research agencies and recommendatign for revision.					X		
Contract with commercial publishers for publication and national distribution of MPIT for teachers of urban Negro nign school students.	X						X
Put MPIT for teachers of culturally deprived urban Negro high school students into operational use nationally.							X
Study teachers of culturally deprived Mexican-American secondary school students to identify and define the critical skills and behaviors needed to teach this group.	X					X	
Develop MPIT for teachers of culturally deprived Mexican-American secondary school students.	X			X			
Conduct extensive field testing and applied field research on MPIT for teachers of culturally deprived Mexican-American high school students.	X	X	X	X		X	
Put MPIT for teachers of culturally deprived Mexican-American nigh school students into operational use in pilot schools.	X		X	X			
Put MPIT for teachers of culturally deprived Mexican-American high school students into operational use throughout the Laboratory region.	X		X	X			
Evaluation of MPIT for teachers of culturally deprived Mexican-American nigh school students by independent research agencies and recommendation for revision.					X		
Contract with commercial publishers for publication and national distribution of MPIT for teachers of culturally deprived Mexican-American nigh school students.	X						X
Put MPIT for teachers of culturally deprived Mexican-American high school students into operational use nationally.							X
Study teachers of non-typical student groups (such as culturally deprived elementary Negro and Mexican-American, Indian pupils, school dropouts, etc.), select 3 where inservice training appears most needed, and identify and define the critical skills and behaviors needed to teach these groups.	X			X	X	X	
Develop a series of 3 MPIT packages for teachers of the nontypical groups selected.	X		X	X	X	X	
Conduct extensive field testing and applied field research on the 3 MPIT for teachers of nontypical groups.	X	X	X	X		X	
Put the 3 MPIT packages for teachers of nontypical groups into operational use in pilot schools.	X		X	X			
Put the 3 MPIT packages for teachers of nontypical groups into operational use throughout Laboratory region.	X		X	X			
Evaluation of the 3 MPIT packages for teachers of nontypical groups by independent research agencies and recommendation for revision.					X		
Contract with commercial publishers for publication and national distribution of the 3 MPIT packages for teachers of nontypical groups.	X						X
Put the 3 MPIT packages for teachers of nontypical groups into operational use nationally.							X

COMPONENT C

INSERVICE EDUCATION FOR TEACHERS ENTERING NEW EDUCATIONAL PROGRAMS

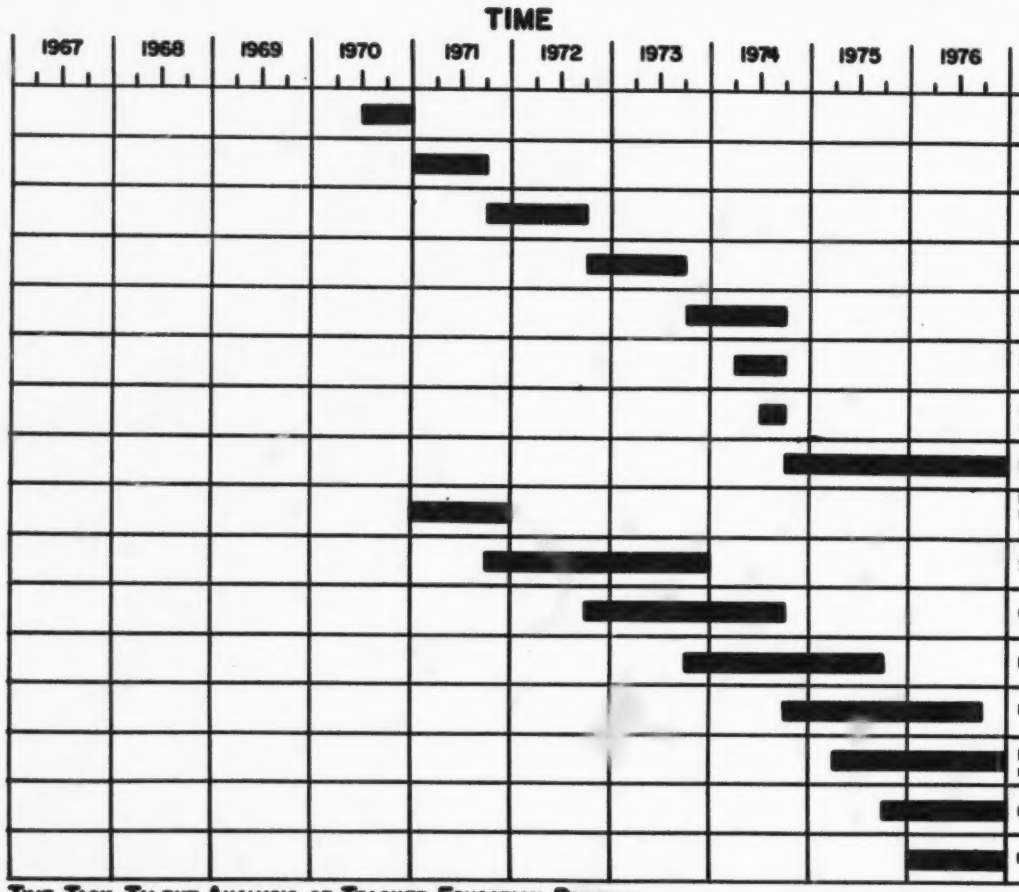


TASKS	TYPES OF PERSONNEL: LABORATORY	STANFORD R&D CENTER	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	COMMERCIAL PUBLISHERS
Review research literature related to inservice training of teachers for team teaching programs, problems in team teaching and the teacher's role in team teaching.	X					X	
Observe teacher teams, interview successful and unsuccessful team teachers and study team teaching roles to identify and define the critical skills and behaviors needed to teach this group.	X	X		X	X	X	
Develop MPIT to train teachers in the skills needed to function effectively in a team teaching program.	X			X	X	X	
Conduct extensive field testing and applied field research on MPIT for teachers in a team teaching program.	X	X	X	X		X	
Put MPIT for teachers in a team teaching program into operational use in pilot schools.	X		X	X			
Put MPIT for teachers in a team teaching program into operational use throughout the Laboratory region.	X		X	X			
Evaluation of MPIT for teachers in a team teaching program by independent research agencies and revisions based on recommendations of evaluating agency.					X		
Contract with commercial publishers for publication and national distribution of MPIT for teachers in a team teaching program.	X						X
Put MPIT for teachers in a team teaching program into operational use nationally.							X
Review research literature related to inservice training of teachers for IPI programs, and the teacher's role in an IPI situation.	X				X	X	
Observe the IPI project in Monterey, Calif., study teachers' behavior and interview participating teachers in order to identify and define the critical skills and behaviors needed to teach in this type of program.	X				X	X	
Develop MPIT to train teachers in the skills needed to function effectively in an IPI program.	X				X	X	
Conduct extensive field testing and applied field research on MPIT for teachers in IPI programs.	X	X	X	X			X
Put MPIT for teachers in IPI programs into operational use in pilot schools.	X		X	X			
Put MPIT for teachers in IPI programs into operational use throughout the Laboratory region.	X		X	X			
Evaluation of MPIT for teachers in IPI programs by independent research agency and revision based on recommendations of evaluating agency.	X				X		
Contract with commercial publishers for publication and national distribution of MPIT for teachers in IPI programs.	X						X
Put MPIT for teachers in IPI programs into operational use nationally.							X
Review research literature related to inservice training of teachers in other new educational programs such as the Madison Project on Discovery teaching, the NOVA High School Project, Stanford CAI project, etc. and select 3 such programs for development of MPIT packages.	X	X			X	X	
Observe the 3 programs selected to identify and define the critical skills and behaviors needed to teach in these programs.	X				X		
Develop MPIT designed to prepare teachers to function effectively in the 3 programs selected.	X				X	X	
Conduct extensive field testing and applied field research on MPIT for teachers entering the 3 educational programs selected.	X	X	X	X			
Put MPIT for teachers entering the 3 educational programs selected into operational use in pilot schools.	X		X	X			
Put MPIT for teachers entering the 3 educational programs selected into operational use throughout the Laboratory region.	X		X	X			
Evaluation of MPIT for teachers entering the 3 educational programs selected by independent research agency and revision based on recommendations of evaluating agency.	X				X		
Contract with commercial publishers for publication and national distribution of MPIT for teachers entering the 3 educational programs selected.	X						X
Put MPIT for teachers entering the 3 educational programs selected into operational use nationally.							X

TIME, TASK, TALENT ANALYSIS OF TEACHER EDUCATION PROGRAM

COMPONENT D

INSERVICE EDUCATION FOR TEACHERS PREPARING TO IMPLEMENT NEW CURRICULA



TASKS	TYPES OF PERSONNEL: LABORATORY	STANFORD R&D CENTER	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	COMMERCIAL PUBLISHERS
Review research literature concerned with the teaching of the new science curricula and select one curriculum for development of a MPIT.	X				X	X	
Develop MPIT for teachers who are preparing to teach the selected new science curriculum.	X				X		
Conduct extensive field testing and applied field research on the new science curriculum MPIT.	X	X	X	X			
Put the new science curriculum MPIT into operational use in pilot schools.	X		X	X			
Put the new science curriculum MPIT into operational use throughout the Laboratory region.	X		X	X			
Evaluation of the new science curriculum MPIT by independent research agency and revision based on recommendations of evaluating agency.					X		
Contract with commercial publisners for publication and national distribution of the new science curriculum MPIT.	X						X
Put the new science curriculum MPIT in operational use nationally.							X
Review research literature concerned with teaching of new curricula in all subject matter areas. Observe teachers using new curricula, interview teachers and survey use of new curricula in the region to identify those where MPIT are most needed.	X				X	X	
Select 3 new curricula, and develop MPIT for teachers who are preparing to implement these curricula.	X				X	X	X
Conduct extensive field testing and applied field research on MPIT developed on the 3 new curricula.							
Put the 3 new curricula MPIT into operational use in pilot schools.	X		X	X			
Put the 3 new curricula MPIT into operational use throughout the Laboratory region.	X		X	X			
Evaluation of the 3 new curricula MPIT by independent research agency and revision based on recommendations of evaluating agency.					X		
Contract with commercial publishers for publication and national distribution of the 3 new curricula MPIT.	X						X
Put the 3 new curricula MPIT into operational use nationally (to be completed by January, 1978).							X

Tasks to be Done in The First Year

The previous section provides a rationale and ten-year plan for the Teacher Education Program. This section presents, in some detail, the work to be carried out in this program to December 1, 1967.

The purpose of the first year's work in the Teacher Education Program is to develop an inservice training package designed to improve secondary school teacher behavior in two basic skills areas, use of questioning and reinforcement of pupil behavior in a discussion group setting. This package will be self-contained and adapted for use in any secondary school without the need for supervisory personnel, techicians or supplementary materials. The package will be developed and tested in cooperation with the Stanford R & D Center, cooperating Title III Centers, and selected schools in the region.

Briefly, this project will: (1) measure the use of questioning and verbal reinforcement by a sample of teachers; (2) develop a microteaching package designed to change these behaviors and (3) evaluate resulting changes in teacher questioning behavior, teacher reinforcement behavior, and pupil response.

In the microteaching procedure to be employed in this project, a typical inservice lesson will consist of the following: (1) an initial video tape will be made of the teacher's classroom behavior to establish baseline data; (2) the teacher will study the set of instructional materials on the questioning

and reinforcement skills; (3) the teacher will prepare and teach a short lesson applying those skills; (4) the teacher will view a video tape of a model teacher demonstrating the use of questioning and reinforcement skills; (5) the teacher will view her own video tape lesson and fill out a critique sheet; (6) the teacher will reteach the lesson. At the end of the entire package of two or more lessons, a final video tape of classroom behavior will be made to estimate changes in teacher and pupil behavior.

Instructional objectives for the microteaching package:

-Given a class of twenty-five to thirty students in a secondary school academic subject, the inservice trainee must employ a form of verbal reinforcement in at least eighty percent of the discussion situations in which such reinforcement is judged to be desirable by an independent team of observers.

-Given a class of twenty-five to thirty students in a secondary school academic subject, the inservice trainee should frame questions so as to elicit a desirable student response to at least eighty percent of the questions framed. A desirable pupil response will be defined as one that goes beyond the simple recall level and one that leads to clarification, and increased critical awareness or refocus of the topic under discussion. Pupil responses will be recorded by a trained observer using a rating form.

Research and Development Hypotheses (to be tested in cooperation with the Stanford R & D Center).

-There will be no significant interactions among age and sex of trainee,

age and sex of models, and behavioral changes of trainee.

-There will be no significant differences between the amount of immediate or long term behavioral changes made by trainees given a two lesson package, and trainees given a four lesson package.

-There will be no significant relationship between the amount of behavioral change of trainees on the skills taught in the inservice lesson and the following variables: flexibility-rigidity, anxiety, years of teaching experience, acceptance of self, future career plans, and general intellectual ability.

-There will be no significant relationship between amount of behavioral change of trainees in their use of questioning and student achievement gains, student attitude toward the subject matter, and amount and level of student class participation.

-There will be no significant relationship between amount of behavioral change of trainees in their use of reinforcement, and changes in student self-concept, student achievement, student attitudes toward the teacher, and distribution of participation among students.

-There will be no significant difference in gains made by pupils at different ability levels.

The project will be carried out by completing the following tasks and subtasks:*

-Make a thorough review of the research literature related to the use of questioning and verbal reinforcements in the teaching situation.

*See the attached chart for time and personnel involvement required for each task.

PROGRAM PLAN FOR 1967 YEAR--TEACHER EDUCATION PROGRAM

Component A: BASIC SKILLS INSERVICE EDUCATION

TIME: 1967

M	A	M	J	J	A	S	O	N	TASKS AND SUBTASKS	TYPES OF PERSONNEL: LABORATORY	STANFORD R & D	TITLE III CENTER	SCHOOLS	CONTRACT	CONSULTANTS	PUBLISHERS
									1. Review of research literature on inservice training, microteaching and simulation techniques and teaching skill.							
■									a. Preliminary search of Psychological Abstracts and Education Index.	X						
■									b. Locate important previous work.	X						
■									c. Review all important previous work.	X						
	■								d. Prepare summaries of current state of knowledge in use of questioning, use of teacher reinforcement in the classroom, inservice training, discussion method of teaching, simulation techniques in teaching complex skills.	X						
									2. Develop a microteaching package for inservice training (MPIT) of secondary teachers on two basic teaching skills, i.e. probing and reinforcement based on Stanford research.							
■									a. Evaluate Stanford microteaching materials on microteaching, questioning and reinforcement.	X						
	■	■							b. Plan and produce set of instructional materials on use of questioning and reinforcement in the classroom.	X					X	
			■						c. Obtain teacher evaluation of instructional materials.	X			X			
				■					d. Revise instructional materials.	X						
				■					e. Select teachers to prepare model tapes.	X			X		X	
				■					f. Establish procedures for preparing model tapes.	X					X	
					■	■			g. Prepare a set of eight model tapes, four on questioning and four on reinforcement.	X			X		X	
						■			h. Develop and videotape introduction to describe package and orient teachers.	X					X	
						■			i. Assemble preliminary inservice package from introduction, instructional package and model tapes.	X						

Component A: BASIC SKILLS INSERVICE EDUCATION (Cont'd)

TIME: 1967									TASKS AND SUBTASKS	TYPES OF PERSONNEL						
M	A	M	J	J	A	S	O	N		LABORATORY	STANFORD R&D	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	PUBLISHERS
									3. Conduct initial field testing of basic skills package to determine most effective ways to implement degree of generalizability across subject areas, etc.							
							■	■	a. Tryout on ten teachers.	X		X	X			
								■	b. Teacher evaluation	X			X		X	
								■	c. Package revision based on evaluation and tryout.	X						
									4. Develop and distribute video tape describing the basic skills package for use by educational TV channels.							
						■			a. Prepare script.	X					X	
							■		b. Video tape trial program.	X						
							■		c. Broadcast trial program to a sample of teachers and obtain evaluation.	X						
								■	d. Revise trial and distribute to educational TV channels in the region.	X					X	

Component B: INSERVICE EDUCATION FOR TEACHERS OF NONTYPICAL GROUPS

TIME: 1967									TASKS AND SUBTASKS	TYPES OF PERSONNEL						
M	A	M	J	J	A	S	O	N		LABORATORY	STANFORD R & D	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS	PUBLISHERS
									1. Review the literature on teaching nontypical groups and on the specific skills needed by teachers of such groups.							
					■				a. Preliminary search of Psychological Abstracts and Education Index.	X						
					■				b. Locate important previous work.	X						
					■				c. Review all important previous work.	X						
						■			d. Prepare summaries of current state of knowledge in use of questioning, use of teacher reinforcement in the classroom, inservice training, discussion method of teaching, simulation techniques in teaching complex skills.	X					X	
									2. Study teachers of urban Negro culturally deprived secondary school students to identify and define critical skills and behaviors needed to teach this group.							
							■	■	a. Interview teachers in Oakland, Berkeley, and Richmond schools who are working with Negro culturally deprived secondary school students.	X					X	
							■	■	b. Interview trainees in U.C. intern program.	X				X		
								■	c. Observe classes in schools having large culturally deprived Negro student body.	X				X		
								■	d. Prepare handbook defining critical skills and behaviors and suggesting how skills may be applied in classroom.		X			X	X	

-Make a comparative evaluation of video tape recording systems, establish criteria and select the systems that meet these criteria.

-Obtain competitive bids on video tape systems, purchase systems for developing model tapes and field testing.

-Starting with the preservice materials developed at Stanford R & D Center to teach questioning and reinforcement skills, further develop a set of instructional materials designed for inservice training application.

  -A sample of teachers will be asked to make a qualitative evaluation of the instructional materials.

  -Another sample will be given the materials and tested to determine their level of understanding and retention of the content.

  -A typical set of instructional materials will include a video taped presentation making extensive use of film clips from the classroom to illustrate the skills being taught, and a handbook which will be prepared in a combination of conventional and programed text format.

-A group of ten to fifteen model teachers will be employed as consultants to develop the model tapes to illustrate each of the skills. Model teachers should be selected so as to represent both sexes and at least two age groups. An effort will be made to use a group of model teachers who are heterogeneous in personality and teaching style so as to provide a wide variety of effective applications of the skills being taught.

-A minimum set of eight model tapes will be developed. One tape on questioning and one tape on reinforcement will be developed by model teachers in each of the following categories: Male, age 25-35; Female, age 25-35; Male, age 45-55; Female, age 45-55. Additional model tapes will be developed if

needed. The steps in preparing each model tape would be as follows:

-The Laboratory will contract with the model teachers to provide satisfactory tapes.

-The model teacher will be given the instructional material and asked to study these materials carefully and pass a test on the materials. The model teacher will be asked to make a twenty minute audio tape in his classroom and submit it to the Laboratory to demonstrate his ability to apply the skills in the classroom.

-The teacher will also be asked to try out the skill in his or her classroom during the week preceding the taping.

-The teacher would then prepare a five to ten minute lesson from the regular curriculum in an appropriate subject area to demonstrate the skill being taught.

-An appointment would be made for Saturday morning for the teacher to tape the lesson in his/her own classroom. The teacher would arrange for the services of five students for the taping session.

-The model tape would be made, immediately checked by the teacher and Laboratory staff, discussed and retaped until a satisfactory model tape were obtained.

- An introduction would be developed and taped for use with the package. This introduction would describe the purposes of the package, assure participating teachers that the evaluations were aimed at improving and would also present the instructional package to the teacher. This tape would probably run from ten to thirty minutes and would include film clips of the microteaching process in action, give the teacher some background in microteaching, present the reasons that it is considered a desirable tool for inservice training, and present material on the skills to be learned.

- The preliminary package would be tried on a group of ten teachers who would be asked to evaluate all parts of the package and suggest ways in which the package could be improved.

- A taped program would be developed for showing on Educational TV to aid in disseminating information about the package.

- Observation forms would be developed to be used in evaluating teacher questioning and use of reinforcement before and after inservice training.

- Self evaluation forms would be developed so that the teacher could critically evaluate his/her video taped lessons when viewing the replay.

- The inservice package would then be revised and be made ready for extensive field trial.

- A sample of 160 teachers would be selected from cooperating school districts and would be asked to participate in the project.* (see Table on next page.)

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* This and subsequent tasks would be completed after December 1, 1967 but are included to help the reader fit the next year's work into context.

SUBJECTS AND TREATMENTS TO BE USED IN FIELD TESTING

Subjects				Models	
N	Sex	Age	Experience	Sex	Age
10	M	22-30	First year	M	22-30
10	M	22-30	First year	F	22-30
10	M	22-30	First year	M	40-55
10	M	22-30	First year	F	40-55
10	F	22-30	First year	M	22-30
10	F	22-30	First year	F	22-30
10	F	22-30	First year	M	40-55
10	F	22-30	First year	F	40-55
10	M	40-55	Over 5 years	M	22-30
10	M	40-55	Over 5 years	F	22-30
10	M	40-55	Over 5 years	M	40-55
10	M	40-55	Over 5 years	F	40-55
10	F	40-55	Over 5 years	M	22-30
10	F	40-55	Over 5 years	F	22-30
10	F	40-55	Over 5 years	M	40-55
10	F	40-55	Over 5 years	F	40-55

- Schools would be asked to provide released time for the participating teachers and each teacher would be paid an honorarium of $50.00 to complete an interview and battery of tests outside of regular school hours.

- The pretest would include the following baseline and descriptive measures:
    - A 15 minute video taped sample of trainee and student behavior in a class discussion situation.
    - The Rokeach Dogmatism Scale and/or Test of Behavioral Rigidity.
    - Interview focused on biographical information and teacher attitudes.
    - School and College Abilities Test (college level).
    - Manifest Anxiety Scale.
    - Student achievement measure.
    - Bills' Index of Adjustment and Values (self-concept).
    - Student attitude scale.

- From the eight or more model tapes available, different combinations would be employed to estimate the effect of age and sex differences between the model and trainee upon changes in the trainee's behavior (see Table).

- Half of each teacher group would be given a two hour package and half would be given a four hour package to estimate effects of package length on trainee behavior.

- A battery of post-tests would be administered to include:
    - A 15 minute video taped sample of trainee and student behavior in a class discussion situation.

- Student achievement measure.
- Bills' Index of Adjustment and Values.
- Student attitude scale.

- The teacher sample would be drawn from at least two subject matter fields in order to estimate the relative value of the package in different areas. A later project would be carried out to determine the degree to which a trainee can transfer from models who are teaching in a subject area different from the trainee's area.

- An independent research agency would be contracted to evaluate the package and recommend further revisions.

- Based upon the results of the applied reasearch-field testing phase, and independent evaluation, one or more operational packages would be assembled and made ready for extensive use in the schools in the Laboratory region. It is anticipated that cooperating Title III Centers would disseminate these packages.

- Commercial publishers would be contacted and arrangements made for production and national distribution of the operational package.

Staff Requirements

The staffing for this program will include the following:

- Program Co-Directors (two Senior Program Director II, each at 80% time):
- One director will be responsible primarily for overall supervision and for the evaluation and applied research phases of the program. He will also be responsible for coordinating the efforts of the Laboratory

with the Stanford Research and Development Center and with other colleges and universities as they become involved.

- The other director will be concerned primarily with development and implementation of the inservice training packages. He will also coordinate activities with the cooperating Title III Centers and pilot schools that participate in the program.
- It is anticipated that the Co-Directors of the Teacher Education Program will provide the combination of skills and experience needed for satisfactory achievement of all of the program tasks. As a rule, major decisions regarding any aspect of the program will be made jointly by the Program Co-Directors and the Laboratory Director.

Project Director I (one at 80% time): This person will be an experienced research and development specialist in the microteaching technique and will provide major support during both development and implementation of the microteaching packages. He will also assist in planning and carrying out evaluation and applied research in order to determine the effectiveness of the packages and identify variables that should be manipulated in order to increase this effectiveness.

Senior Program Associate II (three at 80% time):

- One of the Senior Program Associates has extensive experience in inservice education and supervision in the public schools and will contribute primarily to development of the inservice training packages and their implementation. This person will also play a major role in developing sets of instructional materials which are part

of each of the inservice education packages.

- The second Senior Program Associate will work primarily in the applied research and evaluation area and will also be concerned with the identification and definition of critical skills required by teachers in our specific instructional situation.

- The third Senior Program Associate will work primarily on the pupil behavior and pupil-teacher interaction variables of the program. This person will provide feedback for both the research and development aspects of the Teacher Education Program.

Program/Project Associate II (one at 80% time): This person will work primarily in the evaluation of applied research aspects of the program and will carry out professional tasks assigned by the Program Co-Directors. Such activities as observing teacher behavior, developing observation and evaluation forms, training persons to classify teacher behavior recorded on pre and post videotapes, planning and directing the administration of the pre and post test batteries will be assigned to this person.

Secretary I - three would be assigned to the program (full time).

Clerk Typist I - one would be assigned to the program (full time).

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The Communication Program

Introduction

Schools are presently facing responsibilities which, if met, will require that school personnel effectively make complex and difficult decisions about changes in their professional activities. These pressures for change in organization and operation stem from (1) increases in number of students, (2) expanded goals and purposes of education and (3) clearer recognition of the importance of extended education for all citizens for the political, social and economic welfare of the nation. Possibilities for change have increased, too, as a direct result of increasing investments in educational research and development. At present a clearly recognized impediment to prompt and effective change is the fact that school personnel, by and large, are poorly informed about options that could be available to them as they make decisions about how schools are to be organized and operated.

The Far West Laboratory's Communication Program is concerned with increasing the ability of school personnel to make effective decisions that involve changes in their activities by (1) developing strong motivation among school personnel to be informed about new possibilities of meeting new responsibilities, (2) providing an efficient system through which school personnel can have ready access to relevant information and (3) developing organizational arrangements through which schools can utilize information effectively.

It is important to distinguish between providing information about options as decisions are made and influencing the decisions that are made. This is the difference between fact and value. It does not follow that to know about a new educational practice is to decide to adopt it. Rational processes of decision-

making may lead to rejection of a possible innovation. As a consequence, the measure of effective use of information is not the rate of adoption or change, but the degree to which decisions are made with due regard for the implications of all information that can be made available.

The Objectives of the Communication Program

The mission of the Communication Program is to conduct those research, developmental and operational tasks that will bring into existence effective use of information about options available to school personnel as they make decisions in the organization and operation of schools. Final accomplishment of this mission would bring about a state of affairs in which all known alternatives are recognized and evaluated upon the basis of all available evidence as each decision is made. This is a description of an ideal state, one not likely to be attained completely, but one which establishes the desired direction of improvement.

Specific Immediate Objectives -- There are three immediate objectives of the Communication Program:

1. Develop among school personnel a strong positive attitude in support of continuation and enlargement of investments in educational research and development. Specific goals to be achieved are those attitudes that could be measured with an attitude survey of school personnel which are expressed as a readiness on the part of the majority to allocate resources to educational research and development in an amount at least equal to that which has generally been found desirable by forward looking industry, i.e. from 5 to 10 per cent of the total national educational budget.

2. Develop among school personnel a knowledge of educational research and development which support realistic expectations from research and development. Specifically, we would seek to give school personnel the ability to estimate the advantages, disadvantages, benefits and costs of possible innovations in a manner consistent with such estimates if they were made by persons most knowledgeable and experienced in the area of innovation. School personnel should neither be overly optimistic or pessimistic about the possibilities inherent in an innovation, nor should they be overly concerned about the effects of a change upon their role within the school.

3. Develop a climate within school supportive of the full participation of school personnel in educational research and development. Specifically, educational research workers should be able to find ready acceptance to any reasonable request for participation of schools in the work necessary to develop and evaluate a new idea.

These three objectives represent the immediate goals of the program. Base line data will be collected by survey techniques before the initiation of each communication series. Comparisons will be made with post series surveys to measure change in attitude, knowledge and climate. We should be able to measure definite gains in their direction within one year and to have substantially achieved them in three years.

Intermediate Objectives -- Within five years we should be able to specify and have made significant progress toward the attainment of objectives yet to be specified, relative to an effective system for the development, storage, retrieval

and display of the information most needed by school personnel. By that time we can anticipate that such information will have increased vastly in volume and kind as a consequence of expansion of research and development activities.

Long Range Objectives -- Within the long run of approximately ten years our objectives will include establishing effective organizational arrangements within schools whereby the vastly larger amount of information available to school personnel is being used effectively.

Present State of Affairs

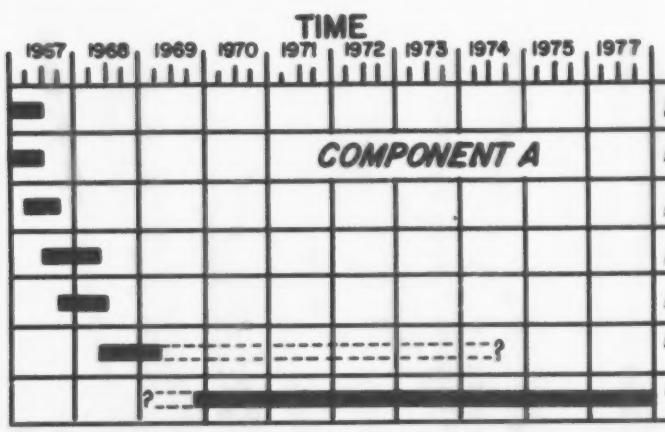
It is expected that the work now underway with the assistance of the Lockheed Missiles and Space Company will provide within six months a well documented and detailed analysis of the present state of affairs in the area of the mission. Generally, the results of Phase I of the Lockheed Study support an early assessment of the present state of affairs as one needing vast improvement. School personnel are confused and dissatisfied with their present information or lack of it about educational research and development. Efforts known by them to be underway to improve the situation are not looked upon as very promising.

Tasks to be Accomplished (Ten Year Projection)

The tasks to be accomplished under the guidance of the proposed mission can be organized within its three major components: (A) development of attitudes and expectations, (B) creation of a system for production, storage retrieval and display of information and (C) establishment of organization arrangement within schools to utilize information effectively.

The chart on page 43presents an analysis of the ten year Communication Program

TIME, TASK, TALENT ANALYSIS OF COMMUNICATION PROGRAM



TASKS	TYPES OF PERSONNEL: LABORATORY	SCHOOLS	CONTRACT	CONSULTANTS
A-1: Develop and distribute 10 ETV programs for viewing by classroom teachers in region.	*		*	
A-2: Develop and distribute a series of "Communications" products.	*			
A-3: Determine impact of ETV programs & "Communications" products on attitudes of school personnel.			*	
A-4: Revise plans, develop and distribute a second series of programs and products.	*		*	
A-5: Determine impact of second series of programs and products.	*			
A-6: Evaluate discrepancies between results achieved and desired attitudinal goals (continue to cycle through A-4, A-5, A-6 until goals are reached.)	*		*	*
A-7: Design, and install as a part of Laboratory operations, a series of programs that maintain attitudinal objectives.	*	*		
B-1: Complete Phase II of Communication and Utilization study.			*	
B-2: Plan Stage I of an information system.			*	*
B-3: Implement Stage I within a small number of pilot schools.	*	*		
B-4: Determine effectiveness of Stage I information system.	*			
B-5: Revise and extend Stage I system to cover all schools in region.	*	*		
B-6: Plan Stage II of an information system.	*		*	*
B-7: Implement Stage II of system in a small number of pilot schools.	*	*		
B-8: Determine effectiveness of Stage II information system.	*			
B-9: Replace Stage I system with Stage II system in all schools in region.	*	*		
C-1: Review state of art in "educational change" and select 3 promising approaches for trial.	*			
C-2: Introduce each of the 3 approaches experimentally within pilot schools.	*	*		*
C-3: Evaluate relative effectiveness of each approach and select one for intensive development.	*			
C-4: Implement approach selected in C-3 in pilot schools in region.	*	*		*
C-5: Determine effectiveness of approach and revise to improve.	*			
C-6: Integrate Stage I of information system and revised approach to change in pilot schools.	*	*	*	
C-7: Determine effectiveness of integrated system.	*			
C-8: Revise and extend integrated system to all schools in region.	*	*		
C-9: Revise integrated system to accommodate Stage II of information system.	*	*	*	
C-10: Evaluate total system and make necessary revisions.	*			*
C-11: Provide procedures for monitoring, up-dating, and maintaining system.	*		*	

in terms of time, tasks, and types of personnel (3-T chart). Examination of this chart will reveal the planned sequence of tasks in the three program components (A,B & C)through 1977 in terms of duration and type of involved personnel.

Tasks and Sub-Tasks to be Accomplished During the First Nine Months of the Communication Program: March 1, 1967 through November 30, 1967

The Communications Program, during its first nine months, will initiate work in each of the three major components of the program.

In Component A, Development of Attitudes and Expectations, we will carry out tasks A-1 to A-5 shown in the following chart:

In Component B, Development of an Informatica System, we will carry out task B-1 as shown in the chart following. The majority of this work will be accomplished under contract with Lockheed Missiles and Space Company. Sub-tasks of this component are shown in the charts as they were outlined by the Lockheed Missiles and Space Company in renegotiation of Phase II of that work.

In Component C, Changing Schools to Utilize R & D Information, we will carry out task C-1, a review of the state of art in educational change. Sub-tasks for this component are also identified in the chart. This work will be accomplished by permanent members of the Laboratory staff.

Staff Requirements

The staffing for this program should include:

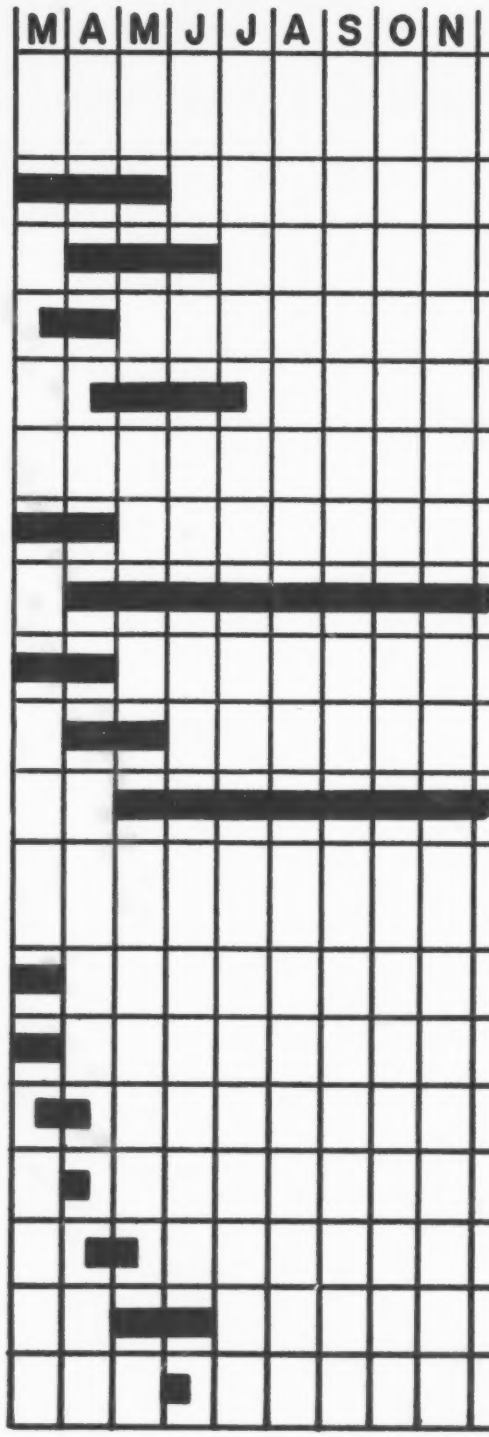
Two (2) Program Co-Directors (each at 80% time):

(A) One director will be concerned primarily with content

PROGRAM PLAN FOR 1967 YEAR--COMMUNICATION PROGRAM

Component A: Development of Attitudes and Expectations

TIME: 1967



TASKS AND SUBTASKS	TYPES OF PERSONNEL: LABORATORY	SCHOOLS	CONTRACT	CONSULTANTS
A-1: Develop and distribute 10 ETV programs for viewing by classroom teachers in region.				
a. Prepare scripts.	X		X	
b. Produce programs.			X	
c. Alert audience.	X	X	X	
d. Arrange distribution.	X		X	
A-2: Develop and distribute a series of "Communications" products.				
a. Determine products to be developed.	X			
b. Develop products for Phase I.	X			X
c. Plan procedures for processing requests.	X			
d. Establish procedures and facilities to process requests.	X			
e. Process requests.	X			
A-3: Determine impact of ETV programs & "Communications" products on attitudes of school personnel.				
a. Plan survey procedures.	X		X	
b. Develop pilot version of survey instruments.	X			
c. Field test pilot version of survey instruments.	X			
d. Revise instruments.	X			
e. Distribute survey instruments (pre-test).	X			
f. Analyze returns to establish base line data.	X		X	
g. Distribute survey instruments (follow-up).	X			

Component A: Development of Attitudes and Expectations (Cont'd.)

TIME: 1967	TASKS AND SUBTASKS	TYPES OF PERSONNEL			
M A M J J A S O N		LABORATORY	SCHOOLS	CONTRACT	CONSULTANTS
	h. Analyze and compare with base line data to assess impact.	X		X	
	i. Relate results of A-3 to Communication Program Component A Objectives.	X			X
	A-4: Revise plans, develop and distribute second series of programs and products.				
	a. Plan series on basis of analysis of results of A-3 (ETV & Products.	X		X	
	b. Prepare scripts.	X		X	
	c. Produce programs.			X	
	d. Alert audience.	X	X	X	
	e. Arrange distribution.	X		X	
	f. Produce "Communication" products for Phase II.	X			X
	A-5: Determine impact of second series of programs and products.				
	a. Plan survey procedures	X			
	b. Develop pilot version of survey instruments.	X			
	c. Field test pilot version.	X			
	d. Revise instruments.	X			
	e. Distribute survey instruments (pre-test).	X			
	f. Analyze returns to establish base lines and compare with first series data.	X		X	
	g. Distribute survey instruments (follow-up).	X			
	h. Analyze and compare with previous data to assess impact.	X		X	
	i. Relate results of A-5-h to program objectives.	X			X

Component B: Development of an Information System

TIME: 1967 (M A M J J A S O N) — TASKS AND SUBTASKS	TYPES OF PERSONNEL: LABORATORY	TITLE III CENTER	SCHOOLS	CONTRACT	CONSULTANTS
B-1: Complete Phase II of Communication and Utilization Study.					
a. Develop program for gathering data on information needs.	X			X	
b. Gather and analyze data on information needs.				X	
c. Establish priority for information needs.	X			X	
d. Conduct inventory of information systems analyses.				X	
e. Develop initial plan of action for establishing FWL Information System.	X	X	X	X	X
f. Integrate organizational change data (see C-1) with plan of action.	X				
g. Perform analysis of potential Phase I Information System Equipment Cost and Effectiveness.				X	
h. Survey and recommend for regional computer center utilization.				X	
i. Develop standardized reporting forms.	X	X	X	X	X
j. Prepare preliminary design for Phase I Information Systems.				X	
k. Prepare systems software and hardware design specification.	X			X	X
1. Develop pilot phase program.				X	
m. Prepare design for FWL Status & Reporting Center.	X			X	

Component C: Changing Schools to Utilize R & D Information

TIME: 1967									TASKS AND SUBTASKS	TYPES OF PERSONNEL				
M	A	M	J	J	A	S	O	N		LABORATORY	TITLE III CENTERS	SCHOOLS	CONTRACT	CONSULTANTS
									C-1: Review state of art in "educational change" and select 3 promising approaches for trial.					
			■	■	■	■	■		a. Review literature on strategies for introducing structural and personnel change.	X				
			■	■	■	■	■		b. Review literature on strategies for and time interval for transmission of ideas in organizations.	X				
					■	■	■		c. Contact research centers which are investigating educational change.	X				
						■	■	■	d. Select 3 strategies for creating within school organizations an arrangement to facilitate the effective use of information resulting from Educational Research and Development.	X				
								■	e. Plan pilot studies of the 3 approaches.	X				
									f. Select schools and supplementary centers for pilot studies.	X	X	X		
									g. Develop techniques and instruments for collecting base line data for pilot studies.	X				

and impact of ETV programs and communication products and their total impact on specific audiences. Included here are determination of needs and interests, searching for and developing program resources, review of scripts, and arranging for production. His concern for impact and implication will extend to concern with the planning and effect of the information systems and educational change program components but will be most prominent in the selection and preparation of the attitudes component.

(B) The other director will be concerned primarily with the development of the information system component, including monitoring of contracts, arranging for consultant review of plans, and evaluation and implementation of successive phases of the communication system. He will also provide technical assistance in the design and evaluation of the attitude and educational change program components.

The Program Co-Directors should provide complementary skills suitable for providing overall direction for the Communications Program.

Two (2) Program Associates (each at 80% time):

(A) The Program Associate I will, under general direction from the Program Co-Directors, begin the review of the state of the art in educational change and assume responsibility for selection and introduction of experimental information utilization arrangements within pilot schools. He will also assist in the execution of tasks in the attitude and information system components.

(B) The Senior Program Associate II will be especially concerned with the production and distribution of ETV programs and may assist in the production and distribution of the "Communications" products.

Two (2) secretaries

One (1) clerk-typist

Redirection of Projects

Seven projects were initiated by the Laboratory during its first year of operation. Six were described in the developmental reports and the seventh was approved by the Board of Directors in December, 1966. The disposition of each of these projects is discussed below.

Project A: Methods for Evaluation of Effectiveness of Educational Methods for Overcoming Cultural Deficiencies.

The early activity in this project has been devoted primarily to planning. Several visits were made to the Evaluation and Research Unit of the Office of Compensatory Education of the California State Department of Education. These visits enabled the Laboratory to obtain a file which identifies every Title I project in California in terms of district, primary, secondary and other activities, objective, age level, evaluation strategy, research design, tests used, time interval, evidence of change, and presence of significant test. A small sample of PACE center, county and district research personnel (approximately fifty persons) have been contacted to identify evaluation and measurement problems. The major effort has been in support of the measurement project (see below) which is seen by those we have interviewed as a much needed contribution to those responsible for planning and evaluating Title I and other programs for the culturally different or deprived.

Field contacts have been made in the Washoe County School District, Nevada, and Berkeley Unified School District, California, to gather data on the educational problems of the culturally different. These field contacts have included classroom observation, discussions with teachers and minority group community leaders,

and meetings with selected administrative personnel. Statistical and qualitative data have been gathered as a result of the latter contacts.

Literature review and research relating to culturally different groups has been carried out continuously and will be an on-going process.

Activities designed to make available knowledge of value to teachers and administrators have been undertaken. These have resulted in lectures to teachers, administrators, and community groups in both California and Nevada and will eventually result in the preparation of printed materials and audio-visual units available for distribution within the framework of the communications program of the Laboratory.

Project A will disappear as a separate project. Certain of the activities, however, will be continued within the Communication Program.

Project B: Study of Research and Development Problem Formulation

This project was initiated by contractor January 15, 1967. The project is based on the experience of the Laboratory, as it gave consideration to the educational needs of the region, that one significant factor in the failure of schools to solve some of these most urgent problems lies in the difficulty experienced in defining the problem. Expressed needs and clearly articulated problems are often poles apart. Methods are needed for translating needs into problems amenable to attack by available techniques. The Laboratory has found in the contractor, the American Institute for Research, a group of personnel who are unusually suited for execution of this effort. Their general objective is to develop alternate systems for identifying educational needs and articu-

lating them into problems which can be attacked by research, development, or social action. Phase I, which will be completed February 28, 1967, is devoted to planning of Phase II, which is a nine month development and evaluation activity. In view of the focusing of Laboratory program in the areas of Teacher Education and Communication, Project B will be encouraged to place special emphasis of problem formulation in these two areas.

Since this project is not a part of either of the programs but will provide valuable input to them, it will be continued as an auxiliary project.

Project C: Study of Requirements for Education of Teachers and Other Professionals

The project is designed to search the psychology, social psychology, sociology, and education literature as preparation for developing some five or six models for teacher in-service education. A project staff composed of a psychologist, social psychologist, sociologist, media specialist, and teacher educator plus their research assistants (N=6) are conducting the literature search. They have held one major conference to elicit views, problem areas, and possible solutions to the in-service education area. Cooperative agreements with selected school districts, Title III, and other agency personnel on this topic have also been made. Conference proceedings of the major conferences are being printed.

It is anticipated that the paper developed for this project will be prepared for Laboratory use on or before June 30, 1967.

The project staff is now focusing their literature search in the areas appropriate for the Teacher Education and Communications missions and will report

on findings for these in their project report. The models of in-service education practices derived for the study will have direct relevance for the two missions above. The project will not continue beyond the present commitment, except that some of the activities will become integral parts of the two programs.

Project D: Communication and Utilization Study

In view of the fact that communication and dissemination is one of the responsibilities most clearly assigned to the Laboratory, early and continuing emphasis has been placed on the study of how the Laboratory could effectively execute this obligation. Besides in-house program planning (which led to the Communication mission alternative discussed in a previous section), a contract with Lockheed Missiles and Space Company was let. Phase I (September 30 to November 30, 1966) included: a literature search for data which describes the communication or information needs of the region, interviews with a selected sample of educational constituents on information and communication needs, a media analysis to determine the most effective use of communications, development of a survey plan and evaluation instrument, and development of a matrix of needs.

One result of Phase I was the identification of educational TV as an effective medium. Phase II, now in progress, is concerned with the development, broadcasting and determination of the impact of ten TV programs, each 30 minutes long, which will be designed to communicate the excitement of, change attitudes toward, and develop realistic expectations concerning educational research and development among teachers in the region.

Obviously, Project D has laid the foundation for the Laboratory's Communication mission. Future activities of Project D will be programmed in direct support of this mission.

Project E: Conference on Instructional Methods Research

One major conference has been held which involved those who have made serious attempts to solve problems of individualizing instruction, and those seeking to utilize new approaches in the schools. The report has been published and will provide input to the ETV portion of the Communication mission, as well as to the Teacher Education mission.

Project F: Conferences on Curriculum Development and Evaluation

A series of conferences have been undertaken in four curriculum areas: 1) mathematics, 2) science programs for elementary, 3) foreign language programs for elementary and junior high schools, 4) the linguistic approach to (English) language instruction.

In each case the purpose of the conference was to translate the needs for teacher preparation and evaluation into practical ideas for Laboratory programs. The Laboratory's sponsorship of these conferences has also provided opportunity for small groups of experts in the relevant areas to take a broad and yet intensive look at development and research. The Laboratory intends to publish and distribute the proceedings of these conferences. Project F will also provide input to the ETV portion of the communication mission and should have relevance to the curriculum skills packages to be developed in the teacher education mission.

Measurement Project

In addition to the six projects outlined in the Laboratory's Initial Plan, a seventh project has been undertaken, partially in support of Project A but also in response to requests on the part of PACE center (Title III) personnel. The measurement project will have as its major end product the development of a handbook especially designed for Title I and Title III evaluators which will provide a starting basis for survey and selection of appropriate measures or techniques for the evaluation of educational objectives in ten broad areas: basic skills, other academic knowledge and skills, self-understanding and worth, social understanding and citizenship, health, attitudes toward school and learning, creating and adaptation, and preparation for vocation and avocation in a world of change. References for experimental design, analysis, self-constructed tests, etc. will also be given. A by-product of this effort will be the development of a tests and measures library at the Laboratory. This project will provide one or more "communications" products and will eventually support evaluation in the teacher education mission, but it is primarily an "auxiliary" project undertaken to provide a vital service to Title I and Title III evaluation activities.

PROGRAM PLAN FOR 1967 YEAR--AUXILIARY PROJECTS

TIME: 1967									TASKS AND SUBTASKS	TYPES OF PERSONNEL						
M	A	M	J	J	A	S	O	N		LABORATORY	STANFORD R & D	TITLE III CENTER	SCHOOLS	CONTRACT	CONSULTANTS	PUBLISHERS
C									A-1: Study of Methods for Evaluation of Programs for Overcoming Cultural Deficiencies.							
									A-2: Evaluation of Curriculum Materials for Educationally Disadvantaged.							
C									a. Planning - completed.	X						
C									b. Pre-testing - completed.	X						
■	■	■							c. Classroom observation.	X			X			
		■							d. Post-testing.	X						
			■	■					e. Analysis and reporting.	X						
									B. Educational Research and Development Problem Formulation.							
C									a. Planning (Phase I) - completed.					X		
■	■								b. Survey of means for identifying educational needs.					X		
	■	■	■						c. Examine existing ways for converting expressed needs into problems.					X		
			■	■	■				d. Design alternate systems for articulating needs into tractable problems.					X		
					■	■			e. Evaluate alternate systems.					X		
							■	■	f. Prepare report.					X		
									C. Study of Requirements for Education of Teachers							
C									a. Planning - completed.	X						
C									b. Conferences.	X					X	
■	■	■	■	■					c. Literature search.	X						

C indicates completion prior to March 1967

AUXILIARY PROJECTS (Cont'd.)

TIME: 1967 M	A	M	J	J	A	S	O	N	TASKS AND SUBTASKS	LABORATORY	STANFORD R&D	TITLE III CENTER	SCHOOLS	CONTRACT	CONSULTANTS	PUBLISHERS
			■	■					d. Preparation of proposals for in-service training of teachers.	X						
				■	■				e. Preparation of report.	X						
									D. Communication and Utilization Study -- (See Communication Program Plan).					X		
C									E. Conference on Instructional Methods Research - completed.	X			X		X	
									F. Conferences.							
C									a. Planning - completed.	X						
C									b. Conduct of 4 conferences - completed.	X			X		X	
■									c. Preparation and publication of reports.	X						
									G. Measurement Handbook.							
C									a. Planning - completed.	X						
C									b. Field survey of user need - completed.	X						
■									c. Preparation of mock-up and one chapter of handbook.	X						
		■							d. Field check of mock-up.	X						
		■	■	■	■	■	■	■	e. Production of subsequent chapters.	X					X	

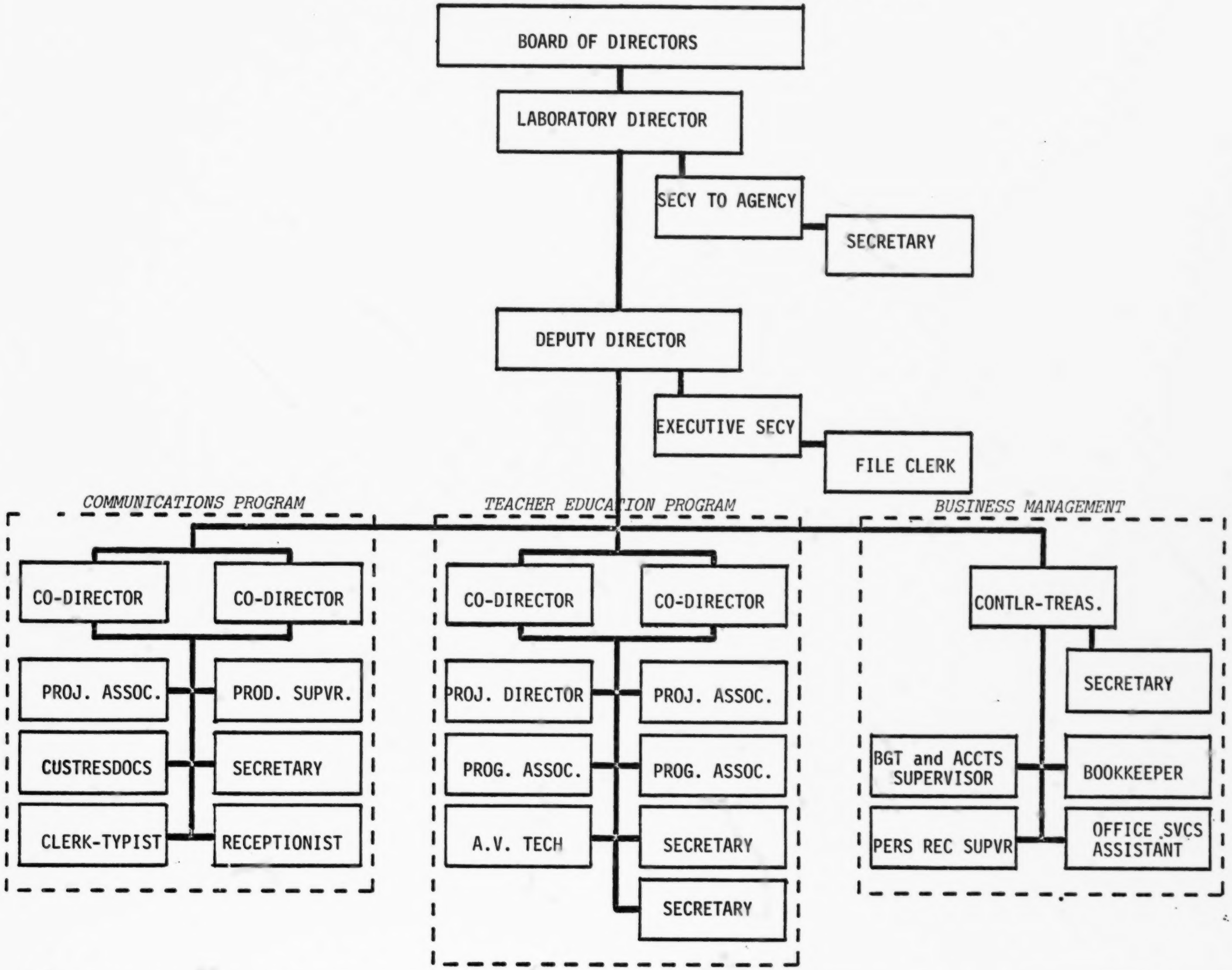
TYPES OF PERSONNEL

C indicates completion prior to March 1967

III

ORGANIZATION

Far West Laboratory for Educational Research and Development



IV

SUMMARY

The purpose of this Supplementary Report to the U.S. Office of Education is to provide a brief record of Laboratory activity during the last few months and a description of future plans, together with staffing and budget estimates.

In the process of preparing the report, the staff gained increased confidence in the viability of the programs recommended by the Executive Panel. The programs have objectives which can be implemented through concrete, interrelated plans and strategies. The staff was able to develop work packages for the coming year as well as the long-range plans which were described in the proposed missions for the Laboratory.

It was also reassuring to observe that the decision-making process adopted by the Board of Directors did function well. The Executive Panel, with its broad representation of regional resources, has demonstrated that it is a strong and responsible body.

GPO 974-610